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REMARKS

The Official Action of July 24, 2003, and the prior art relied upon therein have been carefully reviewed. The claims in the application are now claims 1-20 and 24-30 (claims 10-20 and 24-26 having been withdrawn), and these claims define patentable subject matter warranting their allowance. Accordingly, applicants respectfully request favorable reconsideration and allowance.

Acknowledgement by the PTO of the receipt of applicants' papers filed under Section 119 is noted.

As regards the restriction requirement, applicants respectfully affirm the election of Group I with traverse, the Group I claims now comprising claims 1-9 as well as new linking claim 30.

Applicants particularly traverse the election between Groups I and III, these two Groups being closely tied together because the entire purpose of the present invention is to provide an improved activated carbon for use according to the method of Group III, i.e. the improvement resides in the ability of the activated carbon of Group I to avoid release of undesirable P_2O_5 into the water during use of the activated carbon in water purification. This improvement is

inherent in claim 1, and particularly that part of claim 1 which recites the maximum content of P_2O_5.

In order to tie Groups I and III more tightly together, applicants have amended claim 1 to specify that the claimed activated carbon is adapted for the treatment of water. In addition, applicants have added linking claim 30 which recites the activated carbon of claim 1 in water.

Applicants respectfully request withdrawal of the restriction requirement between Groups I and III, and the examination of the Group III claims 24-29 along with the elected activated carbon claims 1-9 and linking claim 30.

As regards the restriction between Groups I and II, applicants respectfully submit that the requirement should be withdrawn on the basis of the second paragraph of MPEP 803 which **requires** the search and examination of an entire application, even though the requirement is correct, if it would not constitute a serious burden to do so. Applicants submit that it would not involve a serious burden to examine the Group II claims along with the elected Group I claims, even though separate classification exists, because a complete examination of Group I requires consideration of the method by which it is formed.

Moreover, applicants respectfully disagree that the elected product may be made by another process than that of

Group II, let alone one which is **materially** different. There is no evidence that the chemical activation of carbon materials can possibly provide the product of Group I.

Accordingly, applicants also respectfully request withdrawal of the requirement between Groups I and II, and examination of all of the Group II claims also.

Claims 1-9 are rejected as obvious under 35 U.S.C. 103(a) from Sarjeant U.S. patent 4,148,753 (Sarjeant) in view of applicants' alleged admissions. This rejection is respectfully traversed.

Sarjeant deals with neutralization of phosphoric acid activated carbon. It provides a method whereby the residual phosphoric acid found on or interstitially within acid activated carbon pores may be neutralized by conversion to substantially insoluble compounds; it is intended in Sarjeant to "increase the pH of phosphoric acid activated carbon" (column 1, lines 57-58) and to "bind the residual phosphate ion remaining ... and interstitially within the carbon pores in the form of insoluble ash" (column 1, lines 60-63). Actually, the residual phosphate ash is not totally insoluble, but is only "substantially water insoluble" (column 2, lines 16 and 17).

To obtain such a substantially water insoluble ash, neutralization is carried out with a Group II-A alkaline earth oxide or hydroxide (column 2, liens 10-14).

In contrast to Sarjeant, neutralization in the present invention is carried out preferably using urea or ammonia (page 11, line 7 of applicants' specification), and there is no reason to believe that the same results are inherently achieved according to the present invention as according to Sarjeant.

Sarjeant teaches, as noted above, washing cellulosically derived carbon, following a phosphoric acid activation treatment, with an aqueous suspension of oxides or hydroxides of alkaline earth elements of Group II-A (Ca, Mg, Sr, Ba) or of aluminum or zinc; the reaction product is bound as a substantially water insoluble salt. Following this washing, the carbon is subjected to drying in a kiln of approximately 2000°F at the inlet and 400°F at the exit, with a transit time of approximately 30 minutes (column 6, lines 30-34). The carbon and the gas flow in the co-current direction, the carbon entering at ambient temperature and the gas entering at 2000°F (column 2, lines 47-53, and claim 1-E and end of claim 8).

Thus, it should be noted that the carbon treatment temperature used to produce applicants' product is different

from the gas or kiln temperature in Sarjeant: the carbon temperature increases whereas the gas or kiln temperature decreases, but the exit temperature is only 400°F (column 2, line 53) and the carbon never reaches a higher temperature.

Thus, Sarjeant teaches neutralization followed by a drying, without being further followed by a thermal activation (within a temperature range of 800-1000 C). The process taught by Sarjeant is thus significantly different from the one which is described in the present application to produce the claimed product, so that there is no reason to assume that the product obtained after the neutralization taught by Sarjeant is similar to applicants' product called for in claim 1 (or in any sub-claim) nor to have properties similar to those of the claimed product, even if the Sarjeant neutralization were applied to an initial product similar to the one recommended by the pending application.

The rejection of course does not rely on Sarjeant alone, but is instead based on the alleged obviousness of modifying the known "Picabiol®" activated carbon in view of Sarjeant so as to provide neutralization of the residual acid in "Picabiol®". But there is not evidence that such a modification of the "Picabiol®" process would have been obvious. The only reason to do so comes from applicants' own specification, which cannot used as a teaching reference as it

was not available to the person of ordinary skill in the art at the time the present invention was made.

Moreover, even if it were obvious to a person of ordinary skill in the art at the time the present invention was made to somehow try to modify the manufacturing process for producing "Picabiol®" in view of Sarjeant, there is no "reasonable certainty" nor is it "inevitable" that applicants' claimed product would inherently be obtained. The PTO can rely on inherency only when it is "reasonably certain" or "inevitable". There are clearly sufficient differences so that inherency cannot be properly assumed.

Applicants respectfully request withdrawal of the rejection.

Claims 1-9 have also been rejected as obvious under Section 103 from Putyera et al USP 6,225,257 (Putyera) in view of Unger et al USP 4,225,463 (Unger) and further in view of alleged admissions of applicants. This rejection is also respectfully traversed.

Putyera teaches a post-carbonization treatment of microporous carbons for enhancement of methane and natural gas storage properties. The carbons are improved through modification of their microporous structure by heat treatment in an oxidizing atmosphere containing carbon dioxide (see the Abstract). Putyera deals with carbons in the field of storage

media for methane and natural gas (top of column 1). The physical properties are selected for adsorption of natural gas, and are characterized using adsorption of nitrogen at liquid nitrogen temperature (bottom of column 3). The starting carbon material, designed for applications other than storage, is heat treated so that the microporous structure becomes suitable for the storage of fuel gases (column 4, lines 35-40).

There is no mention of any problem due to phosphorous, since the aim of Putyera is to make carbons, initially non-suitable for storage, suitable for such storage. There is no reason why the starting product would have properties similar to those of the starting product described in the pending application. And no neutralization treatment is taught or suggested. Putyera thus concerns subject matter fundamentally different from the present invention, in spite of both relating to activated carbon. There is nothing which explains why the person skilled in applicants' art and concerned with the problem sought to be solved by applicants would be interested in any teachings of Putyera, and why he/she would even think to try to apply such a treatment to a product such as "Picabiol®".

Anyway, the heat treatment of Putyera is different from the thermal treatment proposed by the present invention

by which the claimed product is obtained, which thermal describes the use of steam alone. There are thus no reasons why such a treatment as proposed in Putyera, even if the person skilled in the art would imagine to apply same to "Picabiol®", would lead to the properties of the claimed product of claim 1 or of sub-claims depending thereof.

It may be noted that, as explained in the present application (page 8, lines 9-11), "microporous" is a general term which encompasses micropores and mesopores, which are combined for obtaining some of the performances of the product defined in claim 1. Putyera does not teach or suggest a starting material similar to that described in the pending application. It is thus not possible to infer what would be the performances of a microporous product upon application of the heat treatment taught in Putyera.

Unger deals with porous carbon support materials useful in chromatography and their preparation. It teaches a treatment where the activated carbon is treated with a solvent and treated at a temperature of about 2,400° to 3,000°C, under an inert gas atmosphere (see the Abstract). During the process of Unger, the product loses both weight and porosity (see column 4, lines 45-49).

There again Unger lies in a technical field different from that of the invention. Without any reference

to any problem connected with phosphorous, there would have been no reason or purpose for the proposed combination.

The performances of significance are quite different in Unger from those in the field considered in the pending application; in particular Unger teaches a decrease of the porosity, which is exactly contrary to what is aimed in the present invention. To follow Unger would be to fly in the face of the present invention, the very antithesis of obviousness.

There is no neutralization in Unger. For similar reasons as for Putyera, the person skilled in the art would not even think to consider this document, and even in the affirmative, there is no reason why he/she would obtain the performances mentioned in claim 1.

For similar reasons there is no reason why the person skilled in the art would even think to combine the Putyera and Unger references. In any event, there was no reason for imagining that the obtained product would have the properties of the claimed product.

To summarize, it would not have been obvious to the person of ordinary of ordinary skill in the art at the time the present invention was made to combine the three "references". Putyera and Unger teach nothing about the problem which the present applicants faced and solved, and

there would have been no reason or purpose, motive or incentive for the proposed combination. Moreover, even if the combination were obvious, certainly not admitted by applicants, there is no reasonable certainty or inevitability that applicants' product would have been obtained. Applicants accordingly respectfully request withdrawal of the rejection.

Claims 1-6 and 9 have been rejected as obvious under Section 103 from Hager et al USP 4,416,798 (Hager) in view of JP '888 and Van Duijn USP 5,198,398 (Van Duijn) and further in view of alleged admissions of the applicants. This rejection is respectfully traversed.

Hager deals with pulsed regeneration of adsorption column. It thus deals with recovery of initial properties of the adsorbent, which has nothing to do with improving the performances of a given activated carbon. The person skilled in the art would thus certainly not consider such a document for dealing with the technical problem solved by the invention, and would not think to combine its teachings with anything else.

Van Duijn also deals with regenerating spent activated carbon, and also with a portable container for use therein.

The English language Abstract of JP '888 also indicates that the subject matter thereof is "for

regeneration" of the adsorbent, e.g. activated carbon and presumably an inorganic adsorbent as well. Thus, JP '888 relates to the regeneration as does Hager and Van Duijn, but none of these three citations has anything to do with "applicants' admission" which applicants understand to be the description of the known "Picabiol®" over which the present invention is an improvement.

Therefore, whether or not it would have been obvious to attempt to combine Hager, Van Duijn and JP '888, regarding which applicants need make no comment, it would not have been obvious to attempt to combine any or all of those three citations with the manufacture of "Picabiol®". Moreover, as the three citations have nothing to do with "Picabiol®", there would have been no way to foresee what an attempted combination would achieve, i.e. no reasonable expectation of any useful result.

Applicants respectfully request withdrawal of the rejection.

The prior art documents made of record and not relied upon have been noted, along with the implication that such documents are deemed by the PTO to be insufficiently pertinent to warrant their application against any of applicants' claims.

Applicants respectfully await the results of a first examination on the merits.

Respectfully submitted,

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